MISSISSIPPI
STATE DEPARTMENT OF
HEALTH

2423 North State Street
Post Office Box 1700
Jackson, Mississippi
39215-1700

601/960-7400
601/960-7948 FAX

F.E. Thompson, Jr., MD, MPH
State Health Officer

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Office of the Secretary
Federal Communications Commission
1919 M Street, NW/Room 222
Washington, DC 20554

Reference: CC Docket Number 96-45

Dear Sirs:

Thank you for the opportunity to comment on the proposal by your agency to facilitate the implementation of tele-medicine applications for rural areas. This particularly affects a state like Mississippi which is both rural and economically disadvantaged. The potential of losing "Universal Service" to rural areas as we implement new telecommunications technology has dire consequences for our state. It is therefore a pleasure to be able to support initiatives which will continue to maintain the telecommunications infrastructure to the nation's rural areas.

Our agency, as well as the other agencies of Mississippi state government, is committed to a viable statewide infrastructure as the basis for continued services to its constituents. The importance of telecommunications to the state was recognized by the state's legislators when they funded a state telecommunications backbone as well as connectivity to the Internet. Unfortunately, this funding does not extend to any of the agency service points across the state, but stops at regional frame relay switches. An agency who wishes to utilize the backbone must provide access to the frame relay from all of its locations.

The state is presently funding the state data backbone at $1,000,000 per year. In addition, the state will fund a video backbone for an additional $700,000 per year. These costs are not reflected in any agency-based project costs.

Attached to this comment in questionnaire form, are descriptions of two projects which utilize tele-medicine concepts. These are not the typical remote medicine applications which are usually cited as applications for the technology, but will provide examples of how state public health institutions can improve their delivery of services by use of networking (both people-based and computer-based). Not included in this submission is a client tracking system being installed statewide by the State Department of Mental Health. The State Department of Human Services is also a player in rural health care as it certifies most of the state's Medicaid recipients for the state Medicaid agency. Both of these agencies utilize the state data backbone.

I realize the short time frame under which the commission must act. Therefore, the costs cited in the study questionnaires are estimates in some instances. This is also a very rapidly changing field in which none of us has much control.

Our agency will be happy to provide additional information on any of our activities as necessary.

Sincerely,

David Lohrisch, Ph.D.
Information Systems Consultant

DL/df

Attachment(s)

FCC Questionnaire

1. Name of Project:

   Mississippi State Department of Health Network

2. List of Project Sites:

   This project encompasses all of the agency direct service delivery sites, there are 113 clinics, 156 WIC Food Distribution sites, and 30 other administrative sites. These sites exist in all counties of the state and most towns except the smallest. Expansion sites include cooperating private sector providers and contractors. There are at least 30 Federally qualified rural health clinics which will become a part of this network as well as an undetermined number of private clinics.

3. What is the nearest city with population greater that 50,000 to the sites?

   The agency's reach is statewide with sites across the state. The agency locations vary in distance from across the street from the central site to locations 200 miles away. There are less than 20 locations of the total which are located within the one metropolitan area of population greater than 50,000 which is Jackson. This project has approximately 170 sites with a mean distance from the metropolitan location of 100 miles.

4. Project's Telecommunications provider:

   BellSouth

5. Level of Telecommunications Service to the Project:

   There are approximately 160 sites which have voice grade dial up access. The remainder of the sites are on the state data backbone which utilizes frame relay via 56K or T1 line speeds. The state has DS3 access to the state contractor for Internet access as well as portions of the state internal data backbone. This backbone is shared by all state entities including all educational and libraries.

6. Charges for telecommunications services:

   a. Monthly Charge? Yes
      How Much? $550 per month for frame relay T1
   b. Is it usage based? No
   c. Is there a distance Component? No
   d. Is there an installation Fee? Yes

How Much? $100 per circuit

e. Is the charge regular tariffed rate? A Discount, contracted rate? Yes
How much discount? Approximately 30% off the normal business rate

7. How does the project use telecommunications in the delivery of health care? Include any instances of episodic care or disease outbreaks.

This project is primarily designed to facilitate access to the client and surveillance databases of the State Department of Health. The providers of data are those employees and contractors who provide services for and on behalf of the agency to the citizens of the state. The agency has several databases, the primary one being the PIMS system which captures all agency clinic activities in an online real-time environment. All clinics are networked with the state mainframe to access the PIMS system. Other networked databases are being developed for use by agency employees. These include an Immunization registry, TB surveillance, Developmental and Genetics Registry and Cancer Registry. Support functions of the agency such as Lab, Pharmacy, Central Supply, Purchasing and Budgeting are also supported by the network. Basic WAN functions such as Internet access and Email are also supported. The agency network currently provides some level of access to approximately 2000 of the total 2800 filled positions.

Enhancements to the agency network will add digital video to the agency's capabilities. The initial plans will be to replace staff travel by using the video facilities to provide essential professional and technical training to agency staff and contractors. Other uses will be to provide improved communications through the replacement of face to face meetings and phone conferences with video conferences.

The network will also provide access to both state affiliated users of health data as well as external users of data. For example, the agency's immunization registry will contain the history and immunization status of all children in the state. These data are needed by all schools, colleges and day care centers to verify legal compliance by parents. Using the state network as well as an Internet based server, these data can be made available to those users who need to know. The Immunization program also plans to make available to the same stakeholders, as well as the public at large, electronic versions of public health information pamphlets on a web server. State affiliated schools and libraries would use the state data backbone to access these data. Other information providers in the agency will publish electronically information which they would otherwise provide in paper form to the state's libraries.

In a recent pesticide epidemic, the complete network would have been of great help. Each morning, the participants on the gulf coast (the location of the problem) could have video conferenced with the staff in the Jackson office much more effectively than the current technology of phone conferencing. The existing data network allowed the data on

site to be entered into a database and these data to be immediately accessible by epidemiologists in the central office. With a more complete data network, the state chemical lab could have electronically transmitted results to the site for faster data entry. As it was, summary data was available the next day for news media and the public via the agency web site.

8. Could you do what you are doing with less bandwidth? NO

The implications of lesser bandwidth would cripple the current efforts of the agency to meet its goals and to carry out its mission. Public health depends on timely data and the ability to analyze and interpret data. Plans and technology require increased bandwidth because of the need to move more data amongst more people. The type of data are changing from ASCII (compact) to visual representative graphical data, which requires more capacity to transmit and store.

9. What is the impact of increased bandwidth?

Increased bandwidth will provide the converse effect. We will be able to move more complex packets around the network, providing visually interpreted data in the form of graphics and video. We will be able to provide access to live data files rather than static summary data. This has the potential to allow users to do their own analysis and interpretation of the data which provides a richer debate and better understanding of public health problems.

Increased bandwidth will allow all state entities to increase the number of data and video outlets available to the public. One of the problems with the new high technology of the data highway is access to those with limited resources. Increased (cheaper) bandwidth will allow the state appropriated dollars to buy more access, both for the public and the public entities such as schools and health departments.

10. Do you have email?

All networked participants in the agency have access to email.

11. Internet Access?

Internet access is technically available to all agency networked staff. There are bandwidth limits as well as user policy limits. There are no additional charges for access, the lines are paid by the agency or the state and the state pays for the access provider.

Internet users average 10 hours per month.

12. Internet uses:

Software and technical support for information systems staff;
General vendor information for all users;
Access to Federal resources, Federal register, Centers for Disease Control, National Library of Medicine, etc.;
Email lists for special interest staff.

Mississippi Health Sciences Information Network (MisHIN)

1. Name of project:
Mississippi Health Sciences Information Network (MisHIN)
MisHIN serves as the state's infrastructure for access to and delivery of health sciences information to health care practitioners. Comprised of multi type libraries and other health information providers, the network enables its members to search, request and receive current, accurate information and to link education with clinical practice for quality, cost-effective health care delivery through electronic information transfer regardless of geographic location.

This project is funded through a grant from the National Library of Medicine through the University of Mississippi Medical Center (UMC). The Mississippi State Department of Health is a participant in the grant.

2. Please list each of the project's sites:

Name of Site:	State in which it is located:
Information Providers	
Delta State University Roberts Library, Cleveland	Miss.
Forrest General Hospital Library, Hattiesburg	Miss.
Methodist Medical Center Library, Jackson	Miss.
Mississippi State University College of Veterinary Medicine Library, Starkville	Miss.
Mississippi University for Women Fant Memorial Library, Columbus	Miss.
ParkView Regional Medical Library, Jackson	Miss.
University of Mississippi Medical Center Rowland Medical Library, Jackson	Miss.
Veteran's Administration Medical Center Library, Biloxi-secondary training/marketing center	Miss.
Veteran's Administration Medical Center Library, Jackson	Miss.
Health Agencies	
Mississippi Nurses Association, Jackson	Miss.
Mississippi State Dept. of Health, Jackson	Miss.
Mississippi State Medical Association, Jackson	Miss.
University of Mississippi Department of Clinical Pharmacy Practice, Oxford	Miss.
University of Mississippi Medical Center Department of Medicine, Jackson	Miss.
University of Mississippi Medical Center Department of Surgery, Jackson	Miss.

University of Mississippi Medical Center Division of Medical Genetics, Jackson	Miss.
University of Mississippi Medical Center School of Dentistry	Miss.
University of Mississippi School of Nursing, Jackson	Miss.
Affiliated Organizations	
Mississippi Center, Delta Region AIDS ETC	Miss.
University of Mississippi Medical Center Department of Family Medicine, Jackson	Miss.
University of Mississippi of Preventive Medicine-Genetics, Jackson	Miss.

Please answer the following questions for each of your sites. Use additional sheets if necessary.

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

   City: Jackson Distance from city boundary: 0 miles to 160 miles

4. Name of the project's telecommunications service provider:

   Bell South

5. Level of telecommunications service the project is currently using: (For example, voice grade, 144 Kbps (ISDN), 384 Kbps, T-1 or equivalent)

   The majority of the sites are voice grade; a few sites have access to 56 K or T1 frame relay. (no ISDN available.)

6. Charges for telecommunications service:

   Is there a monthly charge? No.
   If yes, how much is the charge?

   Is there a usage-based charge? Yes, for 800-dial-up for WWW access.
   If yes, how much is the charge? The first month of WWW access is free for new members. The grant pays up to $30 per month for WWW access for members. If WWW usage is more than $30 per month, the member is billed for the portion of the fee in excess of $30. The majority of the users are accomplishing their WWW network activities within the $30 limitation. The access to the MisHIN network computer is toll-free access for members.

   Is there a distance component (such as a per-mile fee) for the charge? No.

If yes, how much was the charge?

Is the charge the regular tarrifed rate, or is there a discount from the telecommunications provider? Tarrifed
If there is a discount, how much is it?

7. How does the project use telecommunications in the delivery of health care? (For example -- to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Access to library services including copies of journal articles, book borrowing privileges, reference and research assistance, and customized information packages;
World Wide Web connections to health data files;
Access to selected databases, journal table-of-contents, a differential diagnostics file, etc.;
Health professional continuing education modules using distance learning technologies; and Additional library services including electronic document ordering, customized information packages, distance learning advanced training seminars;
Internet access to consumer health information sources.

Occasional or episodic uses planned are consultation services. A listing of consultants by specialty is already available via the network.

8. Could the project provide the services it is currently providing with less bandwidth? No. What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would the impact be if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

A lesser level of bandwidth would impact the services negatively. There would be much less user support. If the heath care activities being supported by the network took twice as long, many users would be so frustrated that they would not use the network at all. If the health care activities being supported by the network took half the time, more health care providers would take advantage of the services provided by the network. Network support currently receives complaints from the providers that the network is "too slow."

9. What would the implications of having a greater level of bandwidth be?

A greater level of bandwidth would impact the network positively. More users would take advantage of the services and there would be more opportunities for new and higher levels of information services.

10. Do you have e-mail? Yes, members are given access to e-mail.

11. Do you have Internet access? Yes, members are given access to the Internet.

    If yes, do you incur long-distance charges by using it? No, the membership is given access to the network and to the network via 800 dial-up.

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it.

    Membership has access to the National Library of Medicine through Grateful Med software. The software is provided by the grant. Members can access other National Library of Medicine databases, as well as other databases available via the Internet. Some of these databases require user accounts with log on identification and passwords and have usage charges. Members have access to library on-line catalogs. Members can access a continuing education calendar. Network news, discussion lists, bulletin boards are also access by membership. The state genetics, nutritions, and AIDS training files are available to membership.